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INTRODUCTION

Both absorbable and non-absorbable sutures are routinely used for closure of arthroscopic portal incisions.

Current literature assessing patient satisfaction using either suture type in knee arthroscopic portal closure is limited.

The purpose of this study is to evaluate patient outcomes and satisfaction following wound closure with absorbable (Monocryl) versus non-absorbable (Nylon) sutures during knee arthroscopy.

MATERIALS & METHODS

Patients over 18 years undergoing primary knee arthroscopy were identified during procedure scheduling.

Exclusion criteria included revision procedures, concomitant ligament reconstruction or meniscal repair surgery.

Enrolled patients were randomly assigned to undergo closure with either 3-0 Monocryl or 3-0 Nylon sutures.

Postoperative evaluation was performed at 2-, 6- and 12-weeks and included a Visual Analogue Cosmesis scale, a 10-point visual analogue scale (VAS) for pain, patient scar assessment, and customized questionnaire assessing scar satisfaction.

FIGURES and TABLES

	Absorbable (N=145)	Non-absorbable (N=129)	P Value
Age	51.8 (12.1)	48.7 (14.2)	0.054
Sex:			0.539
Male	87 (60.0%)	83 (64.3%)	
Female	58 (40.0%)	46 (35.7%)	
Smoking Status:			0.308
Current	5 (3.45%)	8 (6.20%)	
Former	28 (19.3%)	19 (14.7%)	
No	110 (75.9%)	102 (79.1%)	
Other Forms	2 (1.38%)	0 (0.00%)	

Table 1. Patient demographics. Mean (SD), No (%)

Enrolled	351
2-week	
VAS Pain	261
Satisfaction	261
Cosmesis	254
6-week	
VAS Pain	237
Satisfaction	236
Cosmesis	229
12-week	
VAS Pain	216
Satisfaction	213
Cosmesis	210

Table 2. Number of patient responses at each survey time point

	Absorbable	Non-absorbable	P Value
Week 2 (n=261)			
Satisfaction with Incision (n=261)	9.19 (1.58)	9.01 (1.61)	0.375
Skin Discoloration (n=254)	2.41 (1.80)	3.00 (2.33)	0.026*
Week 6 (n=236)			
Satisfaction with Incision (n=236)	8.44 (2.49)	9.12 (1.85)	0.019*
Skin Discoloration (n=229)	2.98 (2.45)	3.74 (2.82)	0.032*
Week 12 (n=213)			
Satisfaction with Incision (n=213)	8.54 (2.50)	9.13 (1.76)	0.048*
Skin Discoloration (n=210)	3.06 (2.53)	3.10 (2.44)	0.923

Table 3. Rating of overall satisfaction from 1 (not satisfied) to 10 (extremely satisfied), Mean (SD). Rating of skin discoloration from 1 (no difference from surrounding skin) to 10 (very different from surrounding skin), Mean (SD)

RESULTS

The non-absorbable suture group reported higher overall satisfaction ratings at week 6 follow-up (9.12 ± 1.85 vs. 8.44 ± 2.49, P=.019) and week 12 follow-up (9.13 ± 1.76 vs. 8.54 ± 2.50, P=.048)

There was no difference in pain, swelling, itching, numbness, incisional pain, or burning at any time point.

Patients in the non-absorbable group observed more skin discoloration at 2-week (3.00 ± 2.33 vs. 2.41 ± 1.80, P=.026) and 6-week (3.74 ± 2.82 vs. 2.98 ± 2.45, P=.032) follow-up with no significant difference at 12 weeks.

DISCUSSION

Despite reporting worse skin discoloration at early follow up, patients receiving non-absorbable sutures reported higher overall satisfaction than patients receiving absorbable sutures.

Given that there was no difference in pain, swelling, itching, numbness, incisional pain, or burning, it is possible that non-queried variables such as time spent with patients (possibly increased in the non-absorbable group due to the time spent removing sutures) or frustration with the delayed resorption of absorbable sutures led to this difference.

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